**DOCKET NO.: ATTW01-00025** **PATENT**
**Customer No.: 34700**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

| | | |
|---|---|---|
| In re application of | : | JOHN MARK DAMMROSE ET AL. |
| U.S. Serial No. | : | 09/589,241 |
| Filed | : | June 7, 2000 |
| For | : | SYSTEM AND METHOD OF USING LOCAL NUMBER PORTABILITY (LNP) TO REDIRECT TERMINATING CALLS TO A SERVICE NODE |
| Group No. | : | 2642 |
| Examiner | : | Thjuan P. Knowlin |

**MAIL STOP APPEAL BRIEF-PATENTS**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The undersigned hereby certifies that the following documents:

1. Postcard Receipt;
2. Appeal Brief (in triplicate);
3. Fee Transmittal for FY 2004 (in duplicate); and
4. Check in the amount of $330.00 for the Appeal Brief filing fee.

relating to the above application, were deposited as "First Class Mail" with the United States Postal Service, addressed to: MAIL STOP APPEAL BRIEF-PATENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 7, 2004.

Date: Sept 7 2004 Mailer

Date: 9/7/4 Matthew S. Anderson
Reg. No. 39,093

P.O. Drawer 800889
Dallas, Texas 75380
Phone: (972) 628-3600
Fax: (972) 628-3616
E-mail: *manderson@davismunck.com*

PTO/SB/17 (10-03)
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# FEE TRANSMITTAL for FY 2004

*Effective 10/01/2003. Patent fees are subject to annual revision.*

☐ Applicant claims small entity status. See 37 CFR 1.27

**TOTAL AMOUNT OF PAYMENT** ($) 330.00

| *Complete if Known* | |
|---|---|
| Application Number | 09/589,241 |
| Filing Date | 06/07/2000 |
| First Named Inventor | John Mark Dammrose |
| Examiner Name | Thjuan P. Knowlin |
| Art Unit | 2642 |
| Attorney Docket No. | ATTW01-00025 |

## METHOD OF PAYMENT *(check all that apply)*

☑ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☐ Deposit Account:

Deposit Account Number: 50-0208

Deposit Account Name: Davis Munck

**The Director is authorized to:** *(check all that apply)*

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## FEE CALCULATION

### 1. BASIC FILING FEE

| Large Entity Fee Code | Large Entity Fee ($) | Small Entity Fee Code | Small Entity Fee ($) | Fee Description | Fee Paid |
|---|---|---|---|---|---|
| 1001 | 770 | 2001 | 385 | Utility filing fee | |
| 1002 | 340 | 2002 | 170 | Design filing fee | |
| 1003 | 530 | 2003 | 265 | Plant filing fee | |
| 1004 | 770 | 2004 | 385 | Reissue filing fee | |
| 1005 | 160 | 2005 | 80 | Provisional filing fee | |

**SUBTOTAL (1)** ($)

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

| | Extra Claims | | Fee from below | | Fee Paid |
|---|---|---|---|---|---|
| Total Claims | | -20** = | | X | = |
| Independent Claims | | - 3** = | | X | = |
| Multiple Dependent | | | | | = |

| Large Entity Fee Code | Large Entity Fee ($) | Small Entity Fee Code | Small Entity Fee ($) | Fee Description |
|---|---|---|---|---|
| 1202 | 18 | 2202 | 9 | Claims in excess of 20 |
| 1201 | 86 | 2201 | 43 | Independent claims in excess of 3 |
| 1203 | 290 | 2203 | 145 | Multiple dependent claim, if not paid |
| 1204 | 86 | 2204 | 43 | ** Reissue independent claims over original patent |
| 1205 | 18 | 2205 | 9 | ** Reissue claims in excess of 20 and over original patent |

**SUBTOTAL (2)** ($)

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## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

| Large Entity Fee Code | Large Entity Fee ($) | Small Entity Fee Code | Small Entity Fee ($) | Fee Description | Fee Paid |
|---|---|---|---|---|---|
| 1051 | 130 | 2051 | 65 | Surcharge - late filing fee or oath | |
| 1052 | 50 | 2052 | 25 | Surcharge - late provisional filing fee or cover sheet | |
| 1053 | 130 | 1053 | 130 | Non-English specification | |
| 1812 | 2,520 | 1812 | 2,520 | For filing a request for *ex parte* reexamination | |
| 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to Examiner action | |
| 1805 | 1,840* | 1805 | 1,840* | Requesting publication of SIR after Examiner action | |
| 1251 | 110 | 2251 | 55 | Extension for reply within first month | |
| 1252 | 420 | 2252 | 210 | Extension for reply within second month | |
| 1253 | 950 | 2253 | 475 | Extension for reply within third month | |
| 1254 | 1,480 | 2254 | 740 | Extension for reply within fourth month | |
| 1255 | 2,010 | 2255 | 1,005 | Extension for reply within fifth month | |
| 1401 | 330 | 2401 | 165 | Notice of Appeal | |
| 1402 | 330 | 2402 | 165 | Filing a brief in support of an appeal | $330.00 |
| 1403 | 290 | 2403 | 145 | Request for oral hearing | |
| 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding | |
| 1452 | 110 | 2452 | 55 | Petition to revive - unavoidable | |
| 1453 | 1,330 | 2453 | 665 | Petition to revive - unintentional | |
| 1501 | 1,330 | 2501 | 665 | Utility issue fee (or reissue) | |
| 1502 | 480 | 2502 | 240 | Design issue fee | |
| 1503 | 640 | 2503 | 320 | Plant issue fee | |
| 1460 | 130 | 1460 | 130 | Petitions to the Commissioner | |
| 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR 1.17(q) | |
| 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt | |
| 8021 | 40 | 8021 | 40 | Recording each patent assignment per property (times number of properties) | |
| 1809 | 770 | 2809 | 385 | Filing a submission after final rejection (37 CFR 1.129(a)) | |
| 1810 | 770 | 2810 | 385 | For each additional invention to be examined (37 CFR 1.129(b)) | |
| 1801 | 770 | 2801 | 385 | Request for Continued Examination (RCE) | |
| 1802 | 900 | 1802 | 900 | Request for expedited examination of a design application | |

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** ($) 330.00

| SUBMITTED BY | | | | (Complete *(if applicable)*) | |
|---|---|---|---|---|---|
| *Name (Print/Type)* | Matthew S. Anderson | *Registration No. (Attorney/Agent)* | 39,093 | *Telephone* | 972-628-3600 |
| *Signature* | | | | *Date* | September 7, 2004 |

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IFW AF $


**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

| | | |
|---|---|---|
| In re application of: | : | |
| **JOHN MARK DAMMROSE, ET AL.** | : | Art Unit: **2642** |
| Serial No. **09/589,241** | : | Examiner: **T.P. Knowlin** |
| Filed: **June 7, 2000** | : | Atty's Docket: **ATTW01-00025** |
| For: **SYSTEM AND METHOD OF USING LOCAL NUMBER PORTABILITY (LNP) TO REDIRECT TERMINATING CALLS TO A SERVICE NODE** | : | |

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

# APPEAL BRIEF

Sir:

Applicants herewith respectfully submit that the Examiner's decision of April 6, 2004, finally rejecting Claims 1-25 in the present application, should be reversed, in view of the following arguments and authorities. This Brief is submitted in triplicate on behalf of Appellant for the application identified above. A check is enclosed for the $330.00 fee for filing a Brief on Appeal. Please charge any additional necessary fees to Deposit Account No. 50-0208.

09/10/2004 DEMMANU1 00000018 09589241
01 FC:1402 330.00 OP

# TABLE OF CONTENTS

# TABLE OF AUTHORITIES

## Real Party in Interest

The real party in interest, and assignee of this case, is AT&T Wireless Services, Inc., of Redmond, Washington.

## Related Appeals or Interferences

To the best knowledge and belief of the undersigned attorney, there are none.

## Status of Claims

Claims 1-25 are under final rejection, and are each appealed.

## Status of Amendments after Final

No amendments were filed after final rejection.

# SUMMARY OF INVENTION

*The following summary refers to disclosed embodiments and their advantages, but does not delimit any of the claimed inventions.*

### In General

This invention relates generally to communication networks and, more particularly, to a system and method of using Local Number Portability (LNP) features to redirect terminating calls to a service node, such as a Service Control Point (SCP), so that the network services to communication devices can be initiated, monitored, and billed.[1]

In an Integrated Services Digital Network (ISDN) User Part (ISUP) quasi-associated signaling system, a landline telephone is

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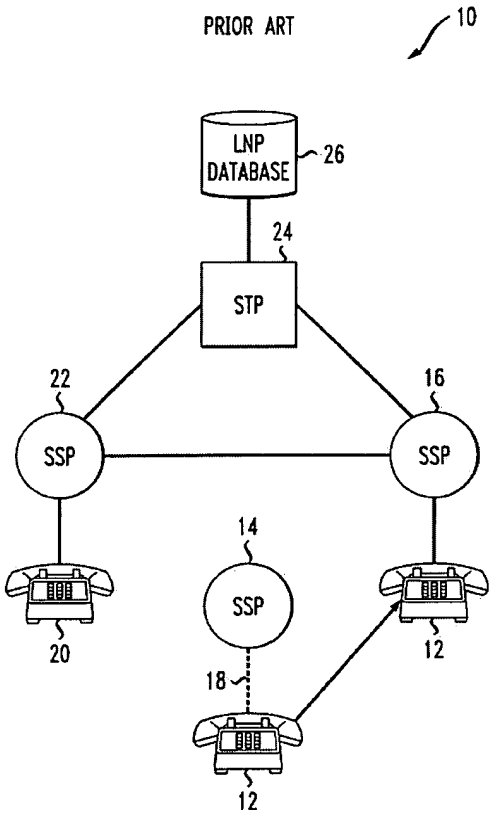
[1]Specification page 1, lines 7-11.

typically serviced through a switch, or a Service Switching Point (SSP). Both the telephone and the SSP have fixed locations inside a district with an area code. Each SSP is associated with an exchange number, and the SSP maintains a database of the telephones it services. [2]

Fig. 1 is a schematic block diagram illustrating the concept of local number portability (LNP) in a communications network 10 (prior art). LNP permits a local telephone number to be moved from a first (original) exchange to a second (new) exchange, or moved from a first switch (SSP) to a second switch (SSP). That is, LNP processes permit the telephone number to become associated with the new exchange, despite the fact that the telephone number is from the old exchange. Telephone 12 is shown as formerly associated with switch 14, but presently associated with switch 16, The previous association with switch 14 is indicated with dotted line 18. Originating telephone 20 originates a telephone call to terminating telephone 12. Local exchange (N-1) switch 22 maintains a record that at least one number associated with switch 14 is a ported

*FIG. 1*
PRIOR ART




[2]Specification page 1, lines 12-22.

local telephone number, or a number that has moved to a new exchange. Therefore, all numbers in that exchange (associated with switch 14) must be checked for LNP. Out-of-band communications are established between switch 22, through Signal Transfer Point (STP) 24 to a LNP database 26. LNP database 26 maintains a record of ported numbers. A Local Routing Number (LRN) is returned to switch 22 which permits switch 22 and switch 16 to establish a trunk connection for voice communications between telephones 20 and 12.[3]

The present invention provides a method for establishing trunk routes, or out-of-band signals through a virtual switch in a quasi-associated signaling system network. The method begins with a request to complete a call to a terminating telephone with a first telephone number. Then, it is determined if the number is ported. If ported, an LNP database is searched for LRN instructions associated with the first number. The LRN instructions direct the signaling to a service node. Depending upon the node type, the service node is inserted into either the voice or out-of-band signal path to monitor communications to the first telephone number. The service node replaces the loop-around process in some applications.[4]

Specifically, a Service Control Point (SCP), or some other service platform, is provided to act as the virtual switch to monitor out-of-band communications. The SCP, once engaged, establishes a switching protocol whereby the trunking path is completed. Then, the SCP can monitor the associated out-of-band communications in the trunk path. The out-of-band messaging provides information about the calling party, the called party, the start of the call, and the end of

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[3]Specification page 2, lines 5-24, and figure 1.

[4]Specification page 6, lines 16-26.

the call. In response to the monitoring, special services are provided to the telephone receiving the call. The monitoring can also result in a billing step that is responsive to monitoring the out-of-band communications of the receiving telephone.[5]

Alternately, the service node can be an SSP or Intelligent Peripheral (IP) which can be inserted into the voice communications path to the device with the first telephone number. Then, special voice-related services can be monitored without the necessity of additional switches in the call path.[6]

A system for establishing signal paths for special services in a communications network is also provided. The system includes a terminating telephone to receive a call and a service node connected in the signal path to the terminating telephone. An LNP database with a list of LRNs cross-referenced with ported telephone numbers supplies LRN instructions to the service node. The service node provides network services to the terminating telephone in response to being connected in the signal path to the terminating telephone.[7]

As above, the service node is either an SCP connected in the out-of-band signal path to the terminating telephone, or an SSP or IP connected in the voice communications signal path to the terminating telephone.[8]

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[5]Specification page 7, lines 1-13.

[6]Specification page 7, lines 14-18.

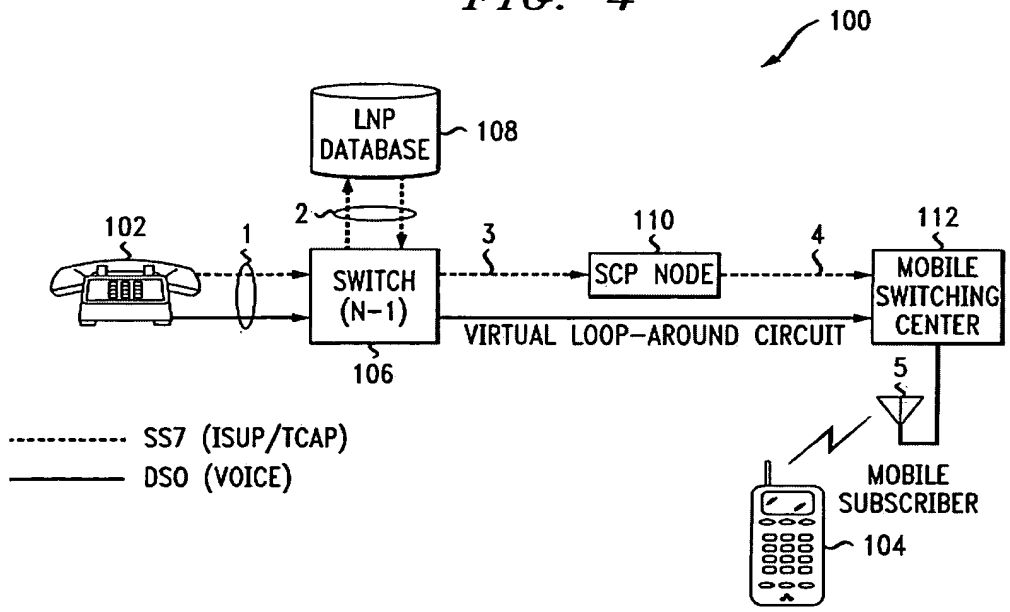
[7]Specification page 7, lines 19-26.

[8]Specification page 8, lines 1-4.

**Detailed Structure and Operation**

Fig. 4, below, is a schematic block diagram of a quasi-associated signaling communications network, including a system 100 for establishing network signal paths. In step 1 a call is placed by telephone 102 attempting to terminate to a mobile subscriber's terminating remote communication device, or terminating telephone 104. The terminating telephone 104 has a first telephone number, or MDN in wireless applications. The terminating telephone 104 sends and receives voice communications. The call arrives at the last switch, (N-1) Switch Signal Point (SSP) 106, outside of a mobile subscriber's terminating switch. The (N-1) switch 106 includes mechanisms which initiate a determination of whether the first telephone number of the terminating telephone 104 is a ported number. The (N-1) switch 106 initiates out-of-band communication signals with the LNP database 108 to determine the

*FIG. 4*



LRN of the first telephone number.[9]

In step 2 a determination has been made at LNP database 108 that the MDN, or first number, requires redirection, since it is a ported number.

In step 3 the call is delivered to the SCP service node 110 using ISUP signaling. The SCP 110 inserts itself into a call to process the monitoring of connect time, redirecting calls for announcements, and disconnecting calls that exceed specific thresholds. The key to the insertion is that the SCP 110 continues to receive and pass on all of the call progress messages between the switches 106 and 112, while simulating trigger events within the virtual switch 110.[10]

The SCP 110 is a network element controlling the call using ISUP signaling, and the SCP 110 provides network services to the terminating telephone 104 in response to being connected in the signal path. The SCP 110 can perform special feature handling using ISUP. For example, the call can be recalled to the SCP 110 for diversion to another destination or call release. Such services include prepaid plans where the mobile subscriber of the terminating telephone 104 has a prepaid account. The SCP 110 monitors the length of the call, or any other services performed, and debits the account for the monitored services. Other services include single number service and call attendant redirection services, such as redirecting calls using a time-of-day schedule. The service node 110 monitors communications with the terminating telephone 104 to provide billing information associated with network services used by the terminating telephone 104. The SCP 110 is considered a virtual

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[9]Specification page 9, line 8 - page 10, line 2.

[10]Specification page 10, line 17 - page 11, line 14.

switch because the physical voice path between the (N-1) switch 106 and the MSC 112 becomes a virtual loop-around circuit.[11]

In step 4 the ISUP portion of the call is forwarded to the MSC 112 for routing to the -final destination. In step 5 the call is completed, either delivered to the terminating telephone 104 or routed to another destination.[12]

*FIG. 5*

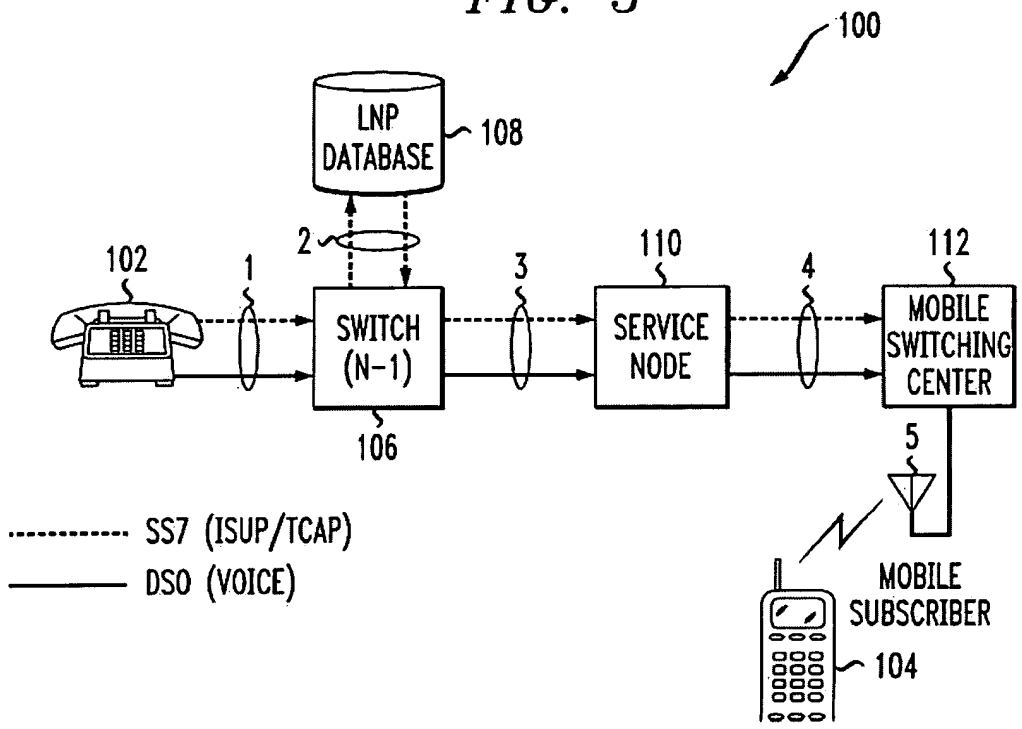


Fig. 5, above, is a schematic block diagram illustrating an alternate aspect of the system of Fig. 4 for establishing signal paths. In Step 1 an originating remote communication device, or originating telephone 102, is attempting to terminate a call to a mobile subscriber's terminating remote communication device, or

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[11]Specification page 11, line 22 - page 12, line 11.

[12]Specification page 12, lines 12-26.

terminating telephone 104, having a first telephone number. The call arrives at the last switch, switch (N-1) 106, outside of a mobile subscriber's serving switch.[13]

In step 2 a determination has been made at the LNP database 108 that the first number (NIDN) requires redirection. Further, the LRN associated with the first number next directs the call to a service node 114.[14]

In step 3 the call is delivered to the service node 114 for special features handling. The service node 114 is selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs, connected in the voice communication signal path to the terminating telephone 104. Examples of the services offered include prepaid service platforms and call attendant redirection services which require caller input, such as platforms and automated recordings that redirect calls for services in response to voice or dialing prompts from the telephone user.[15]

Service node 114, while providing services for the terminating telephone 104, acts as a trunk connection, reducing the total number of legs, or switches involved in terminating the call.[16]

In step 4 the call is forwarded to the MSC 112 for routing to the final destination. In step 5 the call is completed to the terminating telephone 104 or routed to another destination. As above, the use of service node 114 is equally applicable when the terminating

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[13]Specification page 13, lines 1-9, and Figure 5.

[14]Specification page 13, lines 10-14.

[15]Specification page 13, lines 15-23.

[16]Specification page 13, line 24 - page 14, line 5.

telephone 104 is a landline telephone. In this scenario the MSC 112 would be depicted as an SSP (not shown).[17]

*FIG. 7*

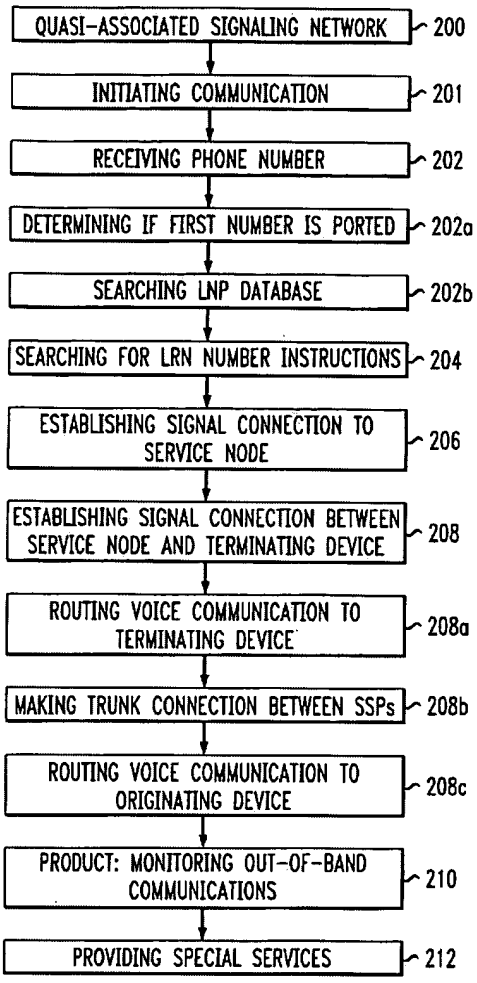


Fig. 7, at right, is a flowchart illustrating a method for establishing network signal paths. Step 200 begins with a quasi-associated signaling communications network. Step 202 receives a first telephone number for a terminating remote communication device, or terminating telephone. Step 204 searches for the Local Routing Number (LRN) instructions associated with the first telephone number. Step 206, following the LRN instructions, establishes a signal connection to a service node which monitors services. Step 208 establishes a signal connection between the service node and the terminating telephone. Step 210 is a product where the service node monitors signals to the terminating remote communication device.[18]

In some aspects of the invention Step 200 includes an SCP as the service node. Then, the signal connection between the SCP and

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[17]Specification page 14, lines 6-11.

[18]Specification page 15, line 23 - page 16, line 9, and Figure 7..

the terminating telephone in step 208 is an out-of-band signal connections, and the monitoring the signals by the service node in Step 210 includes the SCP monitoring out-of-band signals to and from the terminating telephone. The services include prepaid caller and universal number plans where the telephone user retains the same telephone number for a variety of telephone services.[19]

*FIG. 8*

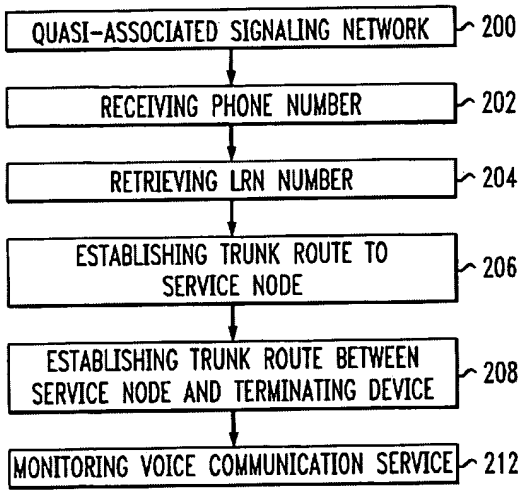


Fig. 8, right, is a flowchart illustrating the present invention of Fig. 7, using the service node as a trunk connection. That is, the establishment of a signal connections in steps 206 and 208 includes establishing a trunk route for voice communications through the service node. In this scenario, the service node is either an IP, an SSP, or a combination of the two. When the service node is an IP, step 212, uses the IP to monitor voice communication services. The voice communication services include voice mail, call screening, voice recognition, and other services involving voice capture and announcement.[20]

Returning to Fig. 7, step 200 includes accessing an LNP database in some aspects of the invention. Then, in step 202a it is determined if the first telephone number is a ported number, and in

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[19]Specification page 16, lines 10-17.

[20]Specification page 16, lines 18-26, and Figure 8.

step 202b a search is made for the first telephone number in an LNP database. Step 204 includes retrieving the LRN associated with the first telephone number from the LNP database.[21]

In other aspects of the invention step 200 includes an originating remote communication device, or originating telephone. Then, in step 201 the originating telephone initiates voice communications with the terminating telephone. Step 202, the reception of the first telephone number, includes the originating telephone dialing the first telephone number.[22]

In some aspects of the invention, step 200 includes accessing a terminating switch and an SSP. The establishment of a signal connection in step 208 includes sub-steps. Step 208a routes voice communications between the terminating telephone and a terminating switch associated with the terminating telephone. Step 208b makes a trunk connection between the terminating switch and an (N-1) SSP, and step 208c routes voice communications between the (N-1) SSP and the originating telephone.[23]

In some aspects of the invention step 200 includes a wireless telephone as the terminating telephone and an MSC wireless network terminating switch. Then, the use of an LRN instructions to establish a signal connection in step 208 includes establishing voice communications between the MSC and the terminating telephone.[24]

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[21]Specification page 17, lines 1-6.

[22]Specification page 17, lines 7-12.

[23]Specification page 17, lines 13-20.

[24]Specification page 17, lines 21-25.

*FIG. 9*

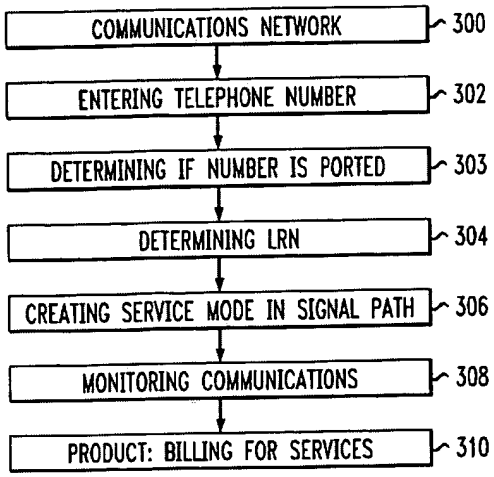


Fig. 9, right, is a flowchart illustrating a method for using a service node to bill communication network services to a terminating remote communication device, or terminating telephone. Step 300 starts with a communications network. Step 302 enters the telephone number of the terminating telephone. Step 304 determines the Local Routing Number (LRN) associated with the telephone number. Step 306, in response to the LRN, accesses a service node in the signal path to the terminating telephone. Step 308 monitors the communications with the terminating telephone, using the service node to determine the service provided. Step 310 is a product where the terminating telephone is billed in response to the monitored services.[25]

In some aspects of the invention, the terminating telephone is a wireless telephone, A further step, step 303, determines if the telephone number (MDN) of the wireless telephone is a ported number. Then, the LRN determination made in step 304 includes searching an LNP database of ported numbers to find the LRN.[26]

In some aspects of the invention, the service node is an SCP. The monitoring of communications in step 308 includes monitoring out-of-band communication signals to the terminating telephone. Step 308 monitors services selected from the group including caller

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[25]Specification page 18, lines 1-11, and Figure 9.

[26]Specification page 18, lines 12-16.

prepaid plans and universal number plans.[27]

In other aspects of the invention, step 300 provides that the service node is selected from the group including of Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs. Then, the monitoring of communications in step 308 includes monitoring voice communications. When step 300 provides an IP service node, step 308 includes the monitored services being selected from the group including call screening, voice activation services, and voice mail.[28]

## ISSUES

1. **Are Claims 1-19 and 22-25 anticipated by Eskafi et al. (USP 6,438,223)?**
2. **Are Claims 20-21 obvious over Eskafi et al. (USP 6,438,223)?**

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[27]Specification page 18, lines 17-21.

[28]Specification page 18, line 22 - page 19 line 2.

**Grouping of Claims**

The claims on appeal do not stand or fall together, as may be seen from the arguments set forth below. Each claim should be considered separately.

## ARGUMENT

**Stated Grounds of Rejection**

The rejections outstanding against the Claims are as follows:

1. Claims 1-19 and 22-25 have been rejected under §102, as anticipated by Eskafi *et al.* (USP 6,438,223). See items 2-12 in the April 6, 2004 Office Action.
2. Claims 20-21 have been rejected under §103, as obvious over Eskafi *et al.* (USP 6,438,223). See items 14-15 in the April 6, 2004 Office Action.

**3. Rejections under §102**

Claims 1-19 and 22-25 have been rejected under §102, as anticipated by Eskafi *et al.* (USP 6,438,223). Anticipation cannot occur unless EVERY limitation of the claim reads on a single reference.[29]

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[29]The requirements to show anticipation are strict:
A party asserting that a patent claim is anticipated under 35 U.S.C. §102 "must demonstrate, among other things, identity of invention." *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 U.S.P.Q. 781, 789 (Fed Cir. 1983), *cert. denied*, 465 U.S. 1026 (1984), *overruled in part on another ground, SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1125, 227 U.S.P.Q. 577, 588-89 (Fed. Cir. 1985) *(en banc)*. Identity of invention is a question of fact, and one who seeks such a finding must show that each element of the claim in issue is found,
(continued...)

**Review of the Reference**

Some of the major technical differences between the reference applied and the disclosure of the present application will now be reviewed. Of course, these points in the specification do not define the scope or interpretation of any of the claims; they are listed merely to help appreciate the importance of the claim distinctions which will be reviewed thereafter.

**Eskafi *et al. (USP 6,438,223)***

Eskafi *et al.* (hereinafter "Eskafi", a copy of which is attached as Appendix C) discloses a system and method for local number portability for telecommunications networks. According to Eskafi, a signaling packet for a call setup to a ported number is intercepted at a signal transfer point, where a query to a database returns a new address of the exchange to which the number has been ported. The new address is used to update the signaling packet at the signal transfer point in order to set up the call to the ported exchange.

While Eskafi addresses LNP, as does the present application, Eskafi fails to teach or suggest several specific claimed features, as discussed in detail below.

**Analysis of Examiner's Rejection**

In view of this analysis, it may be seen that there are some significant problems with the Examiner Knowlin's carefully stated

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[29](...continued)
either expressly or under principles of inherency, in a single prior art reference, or that the claimed invention was previously known or embodied in a single prior art device or practice. *Id.*

*Minnesota Mining and Mfg. v. Johnson & Johnson Orthopaedics.*, 24 U.S.P.Q.2d 1321, 1326 (Fed.Cir. 1992)

arguments.

A specific claimed distinction, identified and argued in each of Applicant's previous responses, is the claimed "service node" and its function of monitoring services. In some embodiments of the present application, the service node is implemented in a service control point (SCP). The specification describes, among other things, that

> a Service Control Point (SCP), or some other service platform, is provided to act as the virtual switch to monitor out-of-band communications. ... Then, the SCP can monitor the associated out-of-band communications in the trunk path. The out-of-band messaging provides information about the calling party, the called party, the start of the call, and the end of the call. In response to the monitoring, special services are provided to the telephone receiving the call. The monitoring can also result in a billing step that is responsive to monitoring the out-of-band communications of the receiving telephone.[30]

Eskafi does not include any similar teaching or suggestion. While Eskafi also discloses an SCP, a common feature for telecommunication signaling systems, Eskafi's SCP does not include the claimed function, and is described as a "database," as shown specifically below.

Independent Claim 1 requires "a service node which

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[30]Specification page 7, lines 1-13, in "Summary of the Invention."

monitors services ... and using the service node, monitoring signals to the terminating remote communication." Nothing in Eskafi appears to teach or suggest this feature. The passages of Eskafi do reference a Service Control Point (SCP), but a typical SCP does not monitor services, and typically provides a database lookup function and control functions, but no monitoring functions - and Eskafi does not describe that the SCP or any other component actually monitors services. In fact, the term "monitor" does not appear in Eskafi at all.

In the final Office Action, Examiner Knowlin appears to rely on Eskafi's SCP as the claimed service node, and specifically cites Eskafi col. 4-5 lines 60-13, col. 5 lines 34-57, and col. 13-15 lines 60-4. A careful analysis of these passages does not indicate that Eskafi's SCP monitors services. For convenience of reference, the portions of these passages that reference Eskafi's SCP are reproduced below, while the portions of those passages that do not reference the SCP are omitted.

Eskafi's col. 4-5, lines 60-13, in relevant part, describe the SCP as follows (note that although this passage references "Fig. 2A"; Eskafi does not have a Figure 2A):

> FIG. 2A illustrates the LRN scheme for implementing Service Provider Portability .... In addition to the SCP database, each service provider is provisioned with an additional LNP-SCP database for storing the routing information for a ported subscriber. ... When a call to a DN that has been predefined as LNP portable, the Service Control Point's (SCP) service logic programmed in the exchange will initiate an AIN or IN based LNP query to the LNP-SCP to obtain the LRN for

> the destination exchange to which the DN that has been ported. The queried LRN is then returned to the exchange to route the call accordingly.

This passage describes the "SCP Database," but does not teach or suggest that the SCP (or the SCP's service logic) monitors any services.

Eskafi's col. 5, lines 34-57, in relevant part, describe the SCP as follows:

> At some point, a connecting exchange must look up the ported information from one of the LNP-SCPs in order to complete the circuit to the ported location. ... In step (2), this induces a STP to lookup LRN(DN1) from LNP-SCP.

This passage describes lookups into the SCP database, but again does not teach or suggest that the SCP monitors any services at all.

Eskafi's col. 13-14, lines 60-4, in relevant part, describe the SCP as follows:

> This will trigger a query to an LNP database (LNP-SCP). The query is done via a STP in which the ISUP part is conventional, but the TCAP part of the SS7 message enables lookup to either an ONS or LNP database and the STP returns a query result to the exchange.

Again, nothing in this passage teaches or suggests that the SCP

monitors any services at all.

In specific response to Applicant's original argument on this point, Examiner Knowlin responded, in the final Office Action, "Eskafi does describe that the SCP (service node) and IP monitors services (col.3 lines 54-65, col. 4 lines 14-21, and col. 9 lines 36-51)." These passages are analyzed as follows.

Col. 3, lines 54-65, reads, in relevant part:

> ... The IP interacts with SCP to have the forwarding of DN1 to DN2 entered into the SCP. ... Subsequently, when a call to DN1 is received in X1, it will trigger X1 to obtain the call-forwarding information directing to DN2 by performing a lookup on the SCP. ...

This passage indicates that the "IP interacts with the SCP" to enter information into the SCP, and that a lookup is performed on the SCP. Nothing in this passage teaches or suggests that the SCP monitors services.

Col. 4, lines 14-21, reads in its entirety:

> The intelligent network-based call-forwarding scheme improves on the switch-based scheme in that the call-forwarding information is not hard-coded into the exchange but rather retrievable from a more flexible database. The service need not be set up at the original access point L1 but could be set up by the subscriber from any access point including L2 that has access to the IP. Otherwise, it still has the same disadvantages as that of switch-based scheme.

This passage says nothing specific about the SCP at all, and has no teaching or suggestion of monitoring services.

Col. 9, lines 36-51 reads in its entirety:

> In an Intelligent or Advanced Intelligent Network (IN/AIN), a set of databases 60 as provided by one or more Service Control Point (SCP) such as 62, 64 may be installed as a point in the SS7 network. The SCP 60 is a database for providing service related information or number porting information and is available for an exchange to retrieve information dynamically via an STP. As described earlier, in a network where service provider portability has been implemented, a LNP-SCP 62 has been added to store service provider number porting information. In one preferred embodiment of the present invention, a database OSCP 70 for storing information about ported number across arbitrary access points is also provided. The OSCP 70 is connectable to the OSTP 50 via the SS7 network 40 and/or via a high-speed connection 72. The set of databases 60 is maintained by a Local Service Management System (LSMS) 80.

This passage indicates that Eskafi's SCP, and its variations, serves as a database, storing information and accessible for lookups. Like the other cited passages, this one does not teach or suggest that the SCP monitors any services.

In the Advisory Action mailed June 20, 2004, Examiner Knowlin responds:

> Although the actual term "monitor" does not appear in Eskafi, it does not mean that monitoring type actions are not taught in Eskafi. As long as monitoring type actions are disclosed in Eskafi (col. 3 lines 46-64 and col. 9 lines 36-51), the actual term "monitor" is not needed.

Of course, Examiner Knowlin is correct in that a feature or function can be taught without the use of a specific term. However, no "monitoring type actions" are disclosed in Eskafi. The relevant portions of both the passages cited by Examiner Knowlin in the Advisory Action are reproduced above, and it is evident that there is no teaching or suggestion of "monitoring" or "monitoring type functions" by the SCP.

So, although the Applicant has studied closely the entirety of Eskafi, and the passages cited by Examiner Knowlin in particular, Eskafi does not teach or suggest "using the service node, monitoring signals to the terminating remote communication." Since a service node as claimed is not taught or suggested by Eskafi, the anticipation rejection must fall, and Claim 1 should be allowed. Similarly, Claims 2-11, which depend (directly or indirectly) from Claim 1, should be allowed.

Independent Claim 12 requires "a service node connected in the signal path ... said LNP database supplying the LRN instruction to said service node ... in which said service node provides network services to said terminating remote communication device." Nothing in Eskafi appears to teach or suggest a service node connected and operating as claimed.

Examiner Knowlin combines his rejection of claim 12 with that of claim 1, relying on the same passages of Eskafi cited and reproduced above. Applicant has studied these passages, and the entirety of Eskafi, but again the Applicant can find nothing in Eskafi that describes the claimed limitations.

Since a service node as claimed is not taught or suggested by Eskafi, the anticipation rejection must fall, and Claim 12 should be allowed. Similarly, Claims 13-20, which depend (directly or indirectly) from Claim 1, should be allowed.

Applicant specifically notes that with regard to dependent claims 2, 13, 14, and 23, the claimed service node is identified as an SCP. A typical SCP, as noted above, may perform lookup or control functions, but does not typically perform the other claimed functions. The American National Standard for Telecommunications - Telecom Glossary 2000 defines an SCP as "An entity in the intelligent network that implements a service control function."[31] As SCPs are not known in the art for performing the functions described and claimed by the present application, and Eskafi fails to describe these claimed functions either, these functions cannot be attributed to the SCP described in Eskafi.

Other specific non-obvious distinctions are noted below. While the Examiner Knowlin includes citations to Eskafi for these limitations in the final Office Action, in many cases an examination of the cited passage makes it clear that the limitations do not actually appear in Eskafi.

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[31]See http://www.atis.org/tg2k/; a printout of the relevant page is included as Appendix D.

**4. Rejections under §103**

Claims 20-21 have been rejected under §103, as obvious over Eskafi.

**Legal Standards**[32]

**Analysis of Examiner's Rejection**

Claim 20, which depends from Claim 12, requires that the "service node monitors communications with said terminating remote communication device to provide billing information associated with network services used by said terminating remote communication device." Examiner Knowlin correctly notes that nothing in Eskafi discloses that the service node monitors the communication for

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[32]The Supreme Court has explained how to apply §103:

> Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined.
>
> *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459, 467 (1966).

Obviousness cannot be inferred from a combination of references without a showing that one of ordinary skill would have been motivated to combine those references:

> When prior art references require selective combination ... to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself.... Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination.
>
> *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 5 U.S.P.Q.2d 1434, 1438 (Fed.Cir. 1988), *quoting Interconnect Planning Corp. v. Feil*, 227 U.S.P.Q. 543 (Fed.Cir. 1985), *and Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick*, 221 U.S.P.Q. 481 (Fed.Cir. 1984).

billing purposes. In fact, nothing in Eskafi appears to teach or suggest any service node, as claimed in independent claim 12, that monitors communications as described (as more fully discussed with regard to claim 12, above).

Claim 21 requires "creating a service node in the signal path to the terminating telephone; monitoring the communications with the terminating telephone using the service node to determine the service provided; and billing the terminating telephone in response to the monitored services." Again, nothing in Eskafi appears to teach or suggest any service node that monitors communications as described.

Further, nothing in Eskafi appears to teach or suggest "in response to the LRN, creating a service node...." (emphasis added).

As the features of claims 20 and 21 are not taught or suggested by Eskafi, these claims should be allowed, as should claims 22-25, that depend from Claim 21.

**Motivation to Combine or Modify**[33]

Examiner Knowlin has not stated any motivation to combine or modify references to reproduce the claimed embodiments.

**Particular Nonobvious Limitations**

Thus, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "establishing a signal connection to a service node which monitors services" as recited, with other limitations, in the context of Claim 1.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "using the service node, monitoring signals to the terminating remote communication" as recited, with other limitations, in the context of Claim 1.

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[33]Where an obviousness rejection is based on a combination of references, the Examiner must show that one of ordinary skill would have been motivated to combine those references. *See In re Nilssen*, 7 USPQ2d 1500 (Fed.Cir. 1988); *Panduit Corp. v. Dennison Mfg. Co.*, 1 USPQ2d 1593, 1597 (Fed.Cir. 1987); *ACS Hospital Systems v. Montefiore Hospital*, 220 USPQ 929 (Fed.Cir. 1984). "When prior art references require selective combination ... to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself.... Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination." *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 5 USPQ2d 1434, 1438 (Fed.Cir. 1988), *quoting Interconnect Planning Corp. v. Feil*, 227 USPQ 543 (Fed.Cir. 1985), *and Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick*, 221 USPQ 481 (Fed.Cir. 1984). "While *[a reference]* may be capable of being modified to run the way *[the applicant's]* apparatus is claimed, there must be a suggestion or motivation in the reference to do so. See In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification."). *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed.Cir. 1990).

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which the monitoring of signals by the SCP includes monitoring out-of-band signals" as recited, with other limitations, in the context of Claim 2.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which monitoring the out-of-band signals includes determining the network services provided to the terminating remote communication device" as recited, with other limitations, in the context of Claim 3.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which the monitoring of services includes determining services selected from the group including prepaid caller plans and universal number plans" as recited, with other limitations, in the context of Claim 4.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "a signal connection between the service node and the terminating remote communications device includes establishing a trunk route for voice communications" as recited, with other limitations, in the context of Claim 5.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "the service node is selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs" as recited, with other limitations, in the context of Claim 6.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "establishing a signal connection through the IP to monitor voice communications services selected from the group including voice mail, call screening, voice recognition, and other services involving voice capture and

announcement" as recited, with other limitations, in the context of Claim 7.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "trunking between the terminating switch and an (N-1) SSP" as recited, with other limitations, in the context of Claim 10.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "the terminating remote unit is a wireless telephone and the terminating switch associated with the first number is a Mobile Switching Center (MSC) for a wireless network" as recited, with other limitations, in the context of Claim 11.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which said service node provides network services to said terminating remote communication device in response to being connected in the signal path" as recited, with other limitations, in the context of Claim 12.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which said service node is a Service Control Point (SOP) connected in the out-of-band signal path to said terminating remote communication device" as recited, with other limitations, in the context of Claim 13.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which said SCP monitors out-of-band communications to provide network services selected from the group including caller prepaid and universal number plans" as recited, with other limitations, in the context of Claim 14.

Further, none of the references, singly or in combination, are

seen to teach or suggest the claimed features of: "said service node is selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs, connected in the voice communication signal path to said terminating remote communication device" as recited, with other limitations, in the context of Claim 15.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "said service node is an IP to provide network services selected from the group including voice mail, voice recognition, call screening, and other services involving voice capture and announcement" as recited, with other limitations, in the context of Claim 16.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "said service node creates a trunk connection to said terminating switch" as recited, with other limitations, in the context of Claim 17.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which said terminating switch is a Mobile Switching Center (MSC) for a wireless network, said MSC being connected to said terminating remote communication device through a wireless medium" as recited, with other limitations, in the context of Claim 18.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "said service node monitors communications with said terminating remote communication device to provide billing information associated with network services used by said terminating remote communication device" as recited, with other limitations, in the context of Claim 20.

Further, none of the references, singly or in combination, are

seen to teach or suggest the claimed features of: "creating a service node in the signal path to the terminating telephone; monitoring the communications with the terminating telephone using the service node to determine the service provided; and billing the terminating telephone in response to the monitored services" as recited, with other limitations, in the context of Claim 21.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "in which the monitoring of communications includes monitoring out-of-band communication signals to the terminating telephone; and in which the monitored services are selected from the group including caller prepaid plans and universal number plans" as recited, with other limitations, in the context of Claim 23.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "the service node is elected from the group including Intelligent Peripherals (IP)s, Service Siwtching Point (SSP), or combinations of Ips and SSPs; and in which the monitoring of communications includes monitoring voice communications" as recited, with other limitations, in the context of Claim 24.

Further, none of the references, singly or in combination, are seen to teach or suggest the claimed features of: "the monitored services are selected from the group including call screening, voice activation services, and voice mail" as recited, with other limitations, in the context of Claim 25.

**Grouping of Claims**

The claims on appeal do not stand or fall together, since they contain distinct recitations which are relevant to patentability and to the specific rejections stated. For example:

Claim 1 recites, among other limitations, using the service node, monitoring signals to the terminating remote communication. This recitation provides advantages, as may be seen from the application as filed, and is not taught or suggested by any of the references, singly or in combination.

Claim 2 recites, among other limitations, that the monitoring of signals by the SCP includes monitoring out-of-band signals.

Claim 3 recites, among other limitations, that monitoring the out-of-band signals includes determining the network services provided to the terminating remote communication device.

Claim 4 recites, among other limitations, that the monitoring of services includes determining services selected from the group including prepaid caller plans and universal number plans.

Claim 5 recites, among other limitations, that a signal connection between the service node and the terminating remote communications device includes establishing a trunk route for voice communications.

Claim 6 recites, among other limitations, that the service node is selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs.

Claim 7 recites, among other limitations, that a signal connection through the IP to monitor voice communications services is selected from the group including voice mail, call screening, voice recognition, and other services involving voice capture and announcement.

Claim 10 recites, among other limitations, trunking between the terminating switch and an (N-1) SSP.

Claim 11 recites, among other limitations, that the terminating remote unit is a wireless telephone and the terminating switch associated with the first number is a Mobile Switching Center (MSC) for a wireless network.

Claim 12 recites, among other limitations, that said service node provides network services to said terminating remote communication device in response to being connected in the signal path.

Claim 13 recites, among other limitations, that said service node is a Service Control Point (SOP) connected in the out-of-band signal path to said terminating remote communication device.

Claim 14 recites, among other limitations, that said SCP monitors out-of-band communications to provide network services selected from the group including caller prepaid and universal number plans.

Claim 15 recites, among other limitations, that said service node is selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs, connected in the voice communication signal path to said terminating remote communication device.

Claim 16 recites, among other limitations, that said service node is an IP to provide network services selected from the group including voice mail, voice recognition, call screening, and other services involving voice capture and announcement.

Claim 17 recites, among other limitations, that said service node creates a trunk connection to said terminating switch.

Claim 18 recites, among other limitations, that said terminating switch is a Mobile Switching Center (MSC) for a wireless network, said MSC being connected to said terminating remote communication device through a wireless medium.

Claim 20 recites, among other limitations, that said service node monitors communications with said terminating remote communication device to provide billing information associated with network services used by said terminating remote communication device.

Claim 21 recites, among other limitations, creating a service node in the signal path to the terminating telephone; monitoring the communications with the terminating telephone using the service node to determine the service provided; and billing the terminating telephone in response to the monitored services.

Claim 23 recites, among other limitations, that the monitoring of communications includes monitoring out-of-band communication signals to the terminating telephone; and in which the monitored services are selected from the group including caller prepaid plans and universal number plans.

Claim 24 recites, among other limitations, that the service node is elected from the group including Intelligent Peripherals (IP)s, Service Siwtching Point (SSP), or combinations of Ips and SSPs; and in which the monitoring of communications includes monitoring voice communications.

Claim 25 recites, among other limitations, that "the monitored services are selected from the group including call screening, voice activation services, and voice mail.

Each claim should be considered separately; or at the very least each claim which is argued separately in the preceding sections of this brief should be considered separately. Argument: The fact that the claims use different formulations (as detailed above) and/or have been argued separately, shows that, if their patentability is not considered separately, any adverse decision would show that the limitations of some claims had been unfairly ignored.

## REQUESTED RELIEF

The Board is respectfully requested to reverse the outstanding rejections and return this application to the Examiner for allowance.

Respectfully submitted,

Matthew S. Anderson, Reg.No. 39,093, for:

DAVIS MUNCK PC
13155 Noel Rd., Suite 900
Dallas, TX 75240

Attorney for Applicant

September 7, 2004

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| In re application of: | : | |
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| **JOHN MARK DAMMROSE, ET AL.** | : | Art Unit: **2642** |
| | : | |
| Serial No. **09/589,241** | : | Examiner: **T.P. Knowlin** |
| | : | |
| Filed: **June 7, 2000** | : | Atty's Docket: **ATTW01-00025** |
| | : | |
| For: **SYSTEM AND METHOD OF USING LOCAL NUMBER PORTABILITY (LNP) TO REDIRECT TERMINATING CALLS TO A SERVICE NODE** | : | |

# APPENDIX A -
# Text of Claims on Appeal

1. (Original) In a quasi-associated signaling communications network including a terminating remote communication device, a method of establishing a network signal path, the method comprising:

receiving a first telephone number for a terminating remote communication device;

searching for Local Routing Number (LRN) instructions, associated with the first telephone number;

using the LRN instructions, establishing a signal connection to a service node which monitors services;

establishing a signal connection between the service node and the terminating remote communication device; and

using the service node, monitoring signals to the terminating remote communication.

2. (Original) The method of claim 1 wherein the service node is a Service Control Point (SCP);

in which the signal connection between the service node and the terminating remote communication device is an out-of-band signal connection; and

in which the monitoring of signals by the SCP includes monitoring out-of-band signals.

3. (Original) The method of claim 2 in which monitoring the out-of-band signals includes determining the network services provided to the terminating remote communication device.

4. (Original) The method of claim 3 in which the monitoring of services includes determining services selected from the group including prepaid caller plans and universal number plans.

5. (Original) The method of claim 1 in which the establishment of a signal connection between the service node and the terminating remote communications device includes establishing a trunk route for voice communications.

6. (Original) The method of claim 5 wherein the service node is selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs.

7. (Original) The method of claim 6 wherein the service node is an IP, the method further comprising:

establishing a signal connection through the IP to monitor voice communications services selected from the group including voice mail, call screening, voice recognition, and other services involving voice capture and announcement.

8. (Original) The method of claim 1 wherein a Local Number Portability (LNP) database is accessed, the method further comprising:

determining if the first telephone number is a ported number;

searching for the first number in an LNP database; and

in which the search for the associated Local Routing Number (LRN) includes retrieving the LRN instructions from the LNP database.

9. (Original) The method as in claim 8 wherein an originating remote communication device is provided, the method further comprising:

using the originating remote communication device, initiating a voice communication with the terminating remote communication device; and

in which the reception of the first telephone number includes the originating remote communication device dialing the first telephone number.

10. (Original) The method of claim 9 wherein an (N-1) Switch Signal Point (SSP) and a terminating switch are accessed, and in which establishment of the signal connection between the service node and the terminating remote communications device includes:

routing voice communication between the terminating remote communication device and a terminating switch associated with the terminating remote communication device;

trunking between the terminating switch and an (N-1) SSP; and

routing the voice communications between the (N-1) SSP and the originating remote communication device.

11. (Original) The method of claim 10 wherein

the terminating remote unit is a wireless telephone and the terminating switch associated with the first number is a Mobile Switching Center (MSC) for a wireless network; and

in which routing of voice communications between the terminating switch and the terminating remote communication device includes establishing voice communication between the MSC and the terminating remote communication device.

12. (Original) In a quasi-associated signaling communications network, a system for establishing network signal paths comprising:

a terminating remote communication device, having a first telephone number, to send and receive voice communications;

a service node connected in the signal path to said terminating remote communication device;

a Local Number Portability (LNP) database including a cross-referenced list of ported telephone numbers and Local Routing Numbers (LRN)s, said LNP database supplying the LRN instruction to said service node in response to the provision of the first telephone number of said terminating remote communication device; and

in which said service node provides network services to said terminating remote communication device in response to being connected in the signal path.

13. (Original) The system of claim 12 in which said service node is a Service Control Point (SOP) connected in the out-of-band signal path to said terminating remote communication device.

14. (Original) The system of claim 13 in which said SCP monitors out-of-band communications to provide network services selected from the group including caller prepaid and universal number plans.

15. (Original) The system of claim 12 in which said service node is

selected from the group including Intelligent Peripherals (IP)s, Service Switching Point (SSP), and combinations of IPs and SSPs, connected in the voice communication signal path to said terminating remote communication device.

16. (Original) The system of claim 15 in which said service node is an IP to provide network services selected from the group including voice mail, voice recognition, call screening, and other services involving voice capture and announcement.

17. (Original) The system of claim 12 further comprising:

a terminating switch associated with the first telephone number of said terminating remote communication device; and

in which said service node creates a trunk connection to said terminating switch.

18. (Original) The system of claim 17 in which said terminating remote communication device is a wireless telephone;

in which said terminating switch is a Mobile Switching Center (MSC) for a wireless network, said MSC being connected to said terminating remote communication device through a wireless medium.

19. (Original) The system of claim 17 further comprising:

an (N-1) Switch Signal Point (SSP);

an originating remote communication device connected to said (N-1) SSP, said originating remote communication device originating and dialing the first number of said terminating remote communication device;

in which said (N-1) SSP includes mechanisms for initiating the determination of whether the first telephone number of said terminating remote communication device is a ported number; in which said (N-1) SSP initiates out-of-band communication signals with said LNP to determine the LRN of the first telephone number; and

in which said (N-I) SSP initiates communication with said service node in response to receiving the LRN.

20. (Original) The system of claim 12 in which said service node monitors communications with said terminating remote communication device to provide billing information associated with network services used by said terminating remote communication device.

21. (Original) In a communications network, a method for using a service node to bill a terminating telephone for network services, the method comprises:

entering the telephone number of the terminating telephone;

determining the Local Routing Number (LRN} associated with the telephone number of the terminating telephone;

in response to the LRN, creating a service node in the signal path to the terminating telephone;

monitoring the communications with the terminating telephone using the service node to determine the service provided; and

billing the terminating telephone in response to the monitored services.

22. (Original) The method of claim 21 wherein the terminating telephone is a wireless telephone, and further comprises:

determining if the telephone number of the wireless telephone is a ported number; and

in which the LRN determination includes searching a Local Number Portability (LNP) database of ported numbers to find the LRN.

23. (Original) The method of claim 22 wherein the service node is a Service Control Point (SCP);

in which the monitoring of communications includes monitoring out-of-band communication signals to the terminating telephone; and

in which the monitored services are selected from the group including caller prepaid plans and universal number plans.

24. (Original) The method of claim 22 wherein the service node is elected from the group including Intelligent Peripherals (IP)s, Service Siwtching Point (SSP), or combinations of Ips and SSPs; and

in which the monitoring of communications includes monitoring voice communications.

25. (Original) The method of claim 24

in which the service node is an IP; and

in which the monitored services are selected from the group including call screening, voice activation services, and voice mail.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| In re application of: | : | |
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| **JOHN MARK DAMMROSE, ET AL.** | : | Art Unit: **2642** |
| | : | |
| Serial No. **09/589,241** | : | Examiner: **T.P. Knowlin** |
| | : | |
| Filed: **June 7, 2000** | : | Atty's Docket: **ATTW01-00025** |
| | : | |
| For: **SYSTEM AND METHOD OF USING LOCAL NUMBER PORTABILITY (LNP) TO REDIRECT TERMINATING CALLS TO A SERVICE NODE** | : | |

# APPENDIX B - Copy of Formal Drawings

*FIG. 1*

PRIOR ART

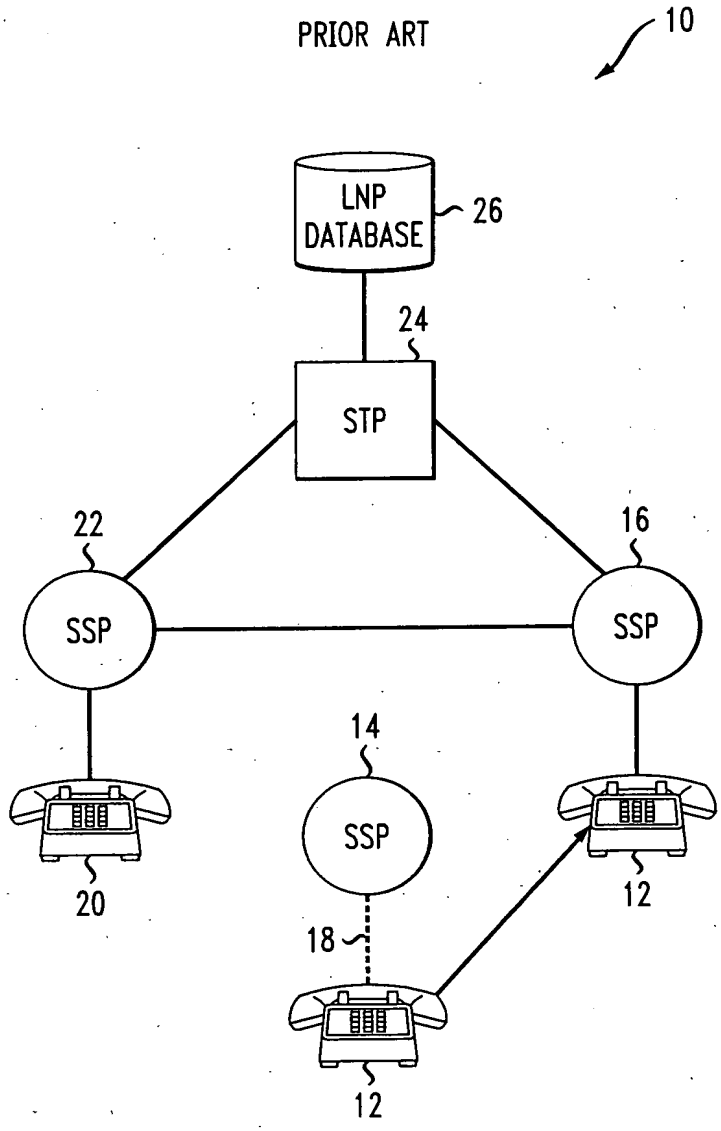


*FIG. 2*

PRIOR ART

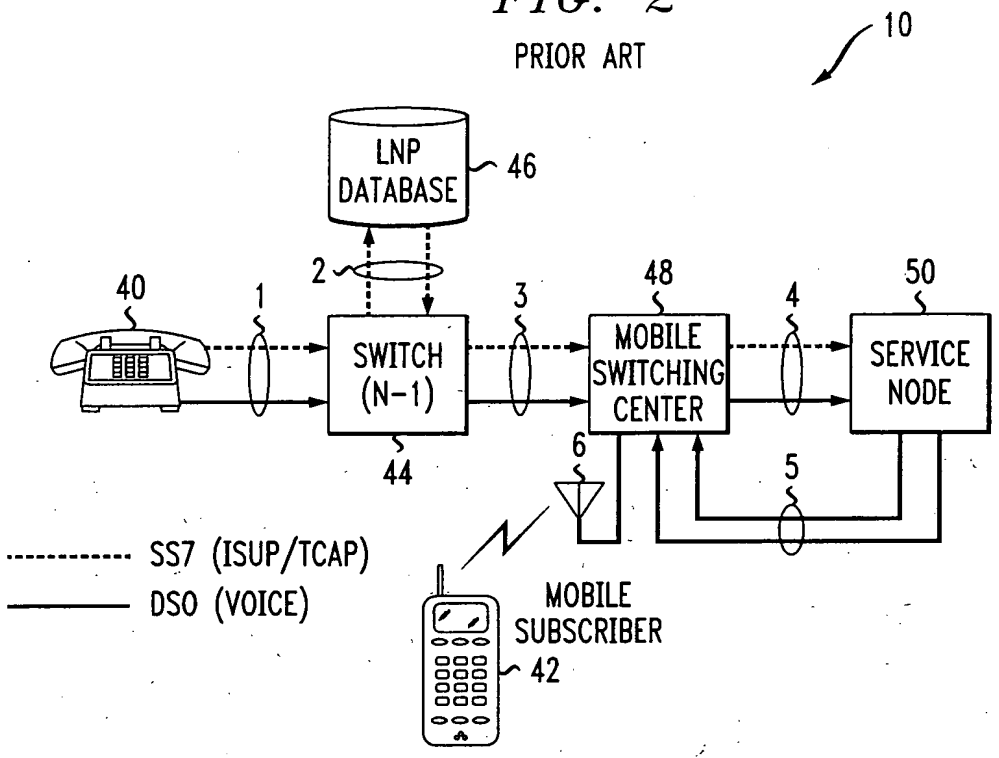



*FIG. 3*

PRIOR ART

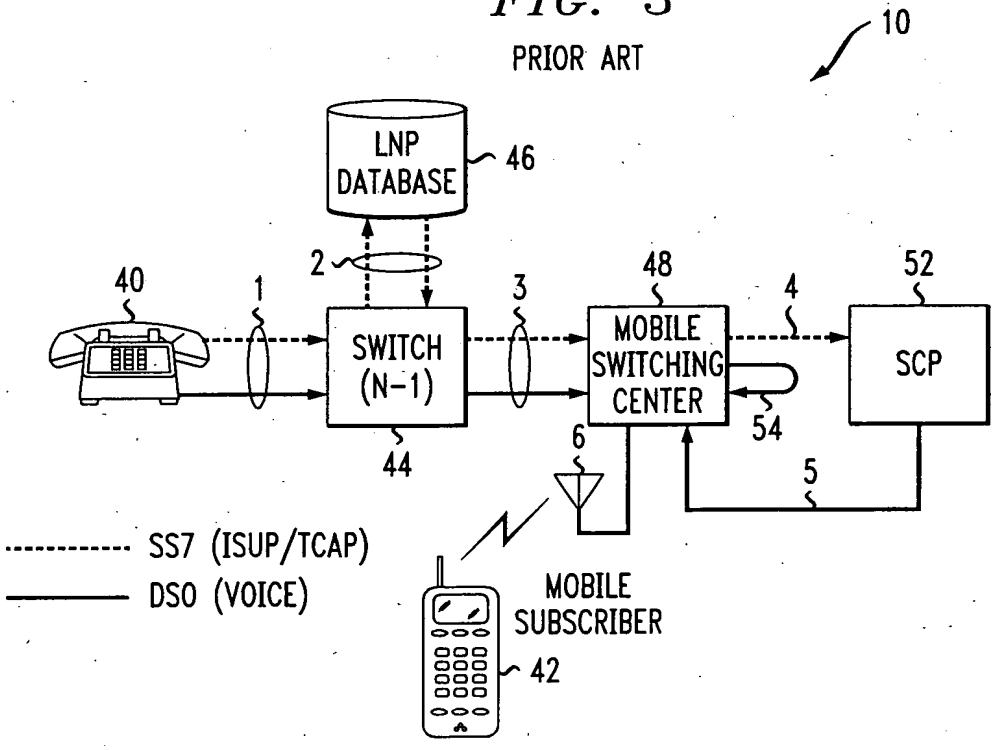


*FIG. 4*

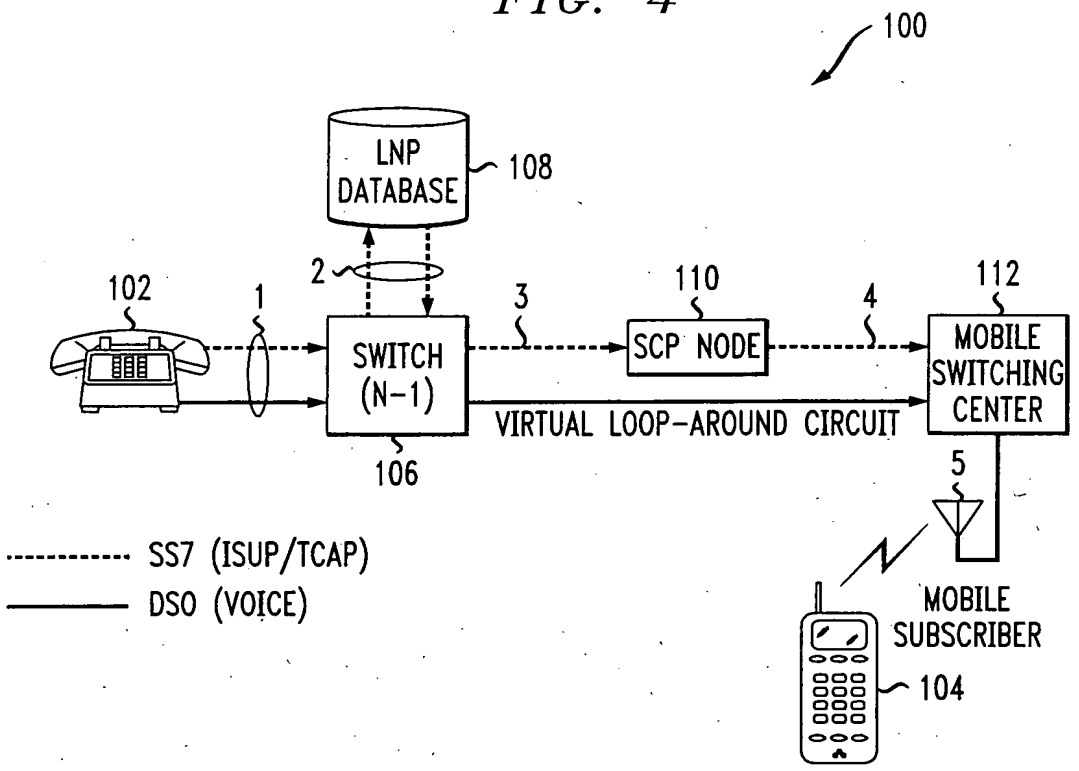

100
LNP DATABASE
108
2
102
1
3
110
4
112
SWITCH (N-1)
SCP NODE
MOBILE SWITCHING CENTER
VIRTUAL LOOP-AROUND CIRCUIT
106
5
SS7 (ISUP/TCAP)
DSO (VOICE)
MOBILE SUBSCRIBER
104

*FIG. 5*

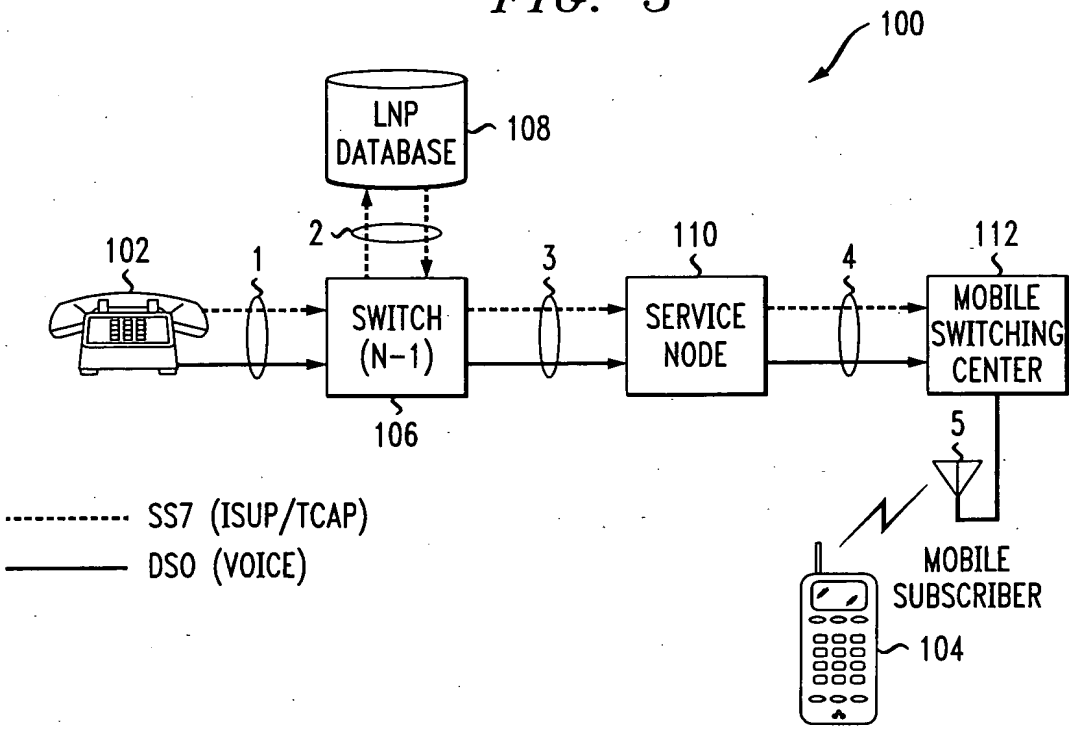

100
LNP DATABASE
108
2
102
1
3
110
4
112
SWITCH (N-1)
SERVICE NODE
MOBILE SWITCHING CENTER
106
5
SS7 (ISUP/TCAP)
DSO (VOICE)
MOBILE SUBSCRIBER
104

FIG. 6

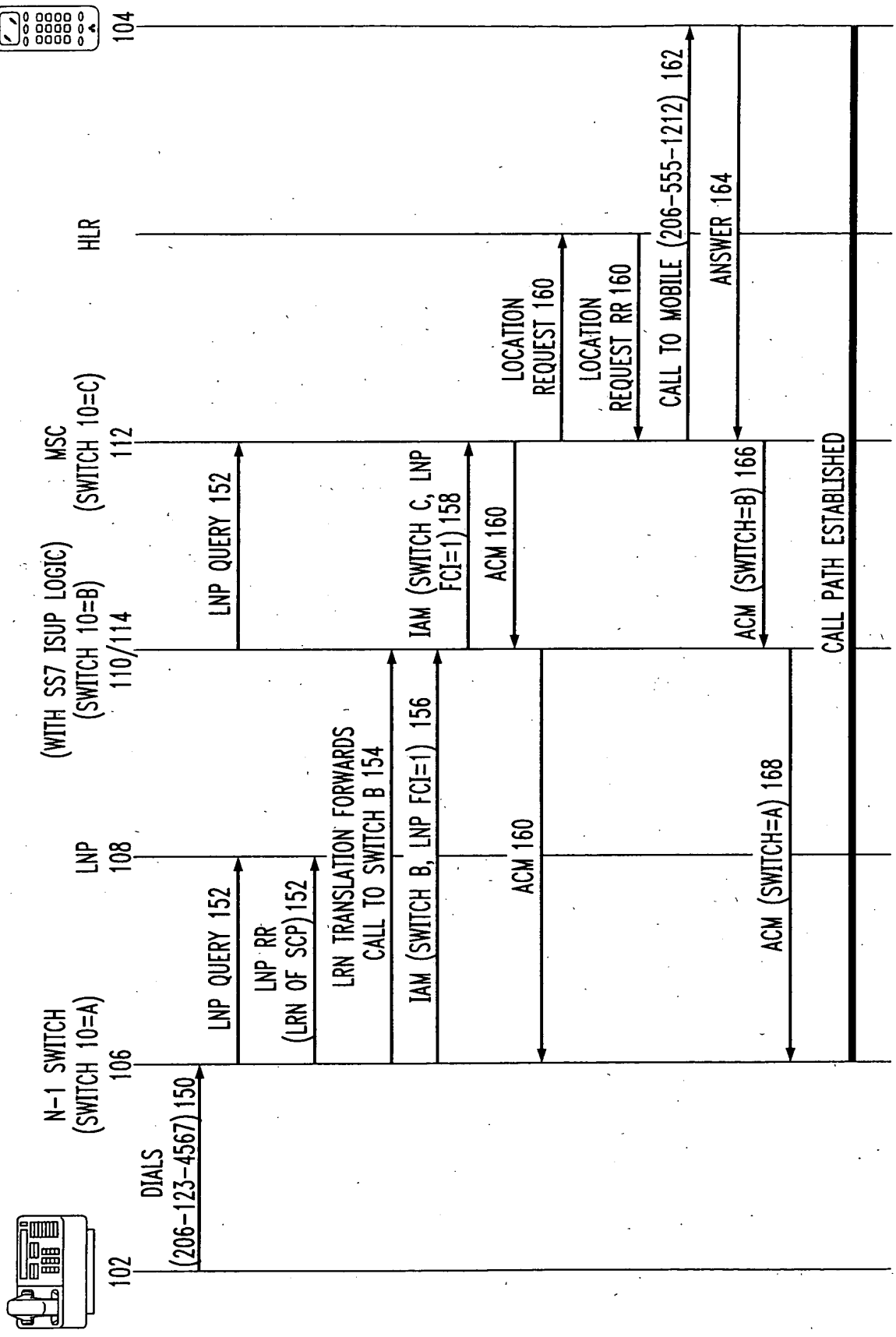

102
DIALS (206-123-4567) 150
N-1 SWITCH (SWITCH 10=A) 106
LNP 108
(WITH SS7 ISUP LOGIC) (SWITCH 10=B) 110/114
MSC (SWITCH 10=C) 112
HLR
104
LNP QUERY 152
LNP RR (LRN OF SCP) 152
LRN TRANSLATION FORWARDS CALL TO SWITCH B 154
IAM (SWITCH B, LNP FCI=1) 156
IAM (SWITCH C, LNP FCI=1) 158
LNP QUERY 152
ACM 160
ACM 160
LOCATION REQUEST 160
LOCATION REQUEST RR 160
CALL TO MOBILE (206-555-1212) 162
ANSWER 164
ACM (SWITCH=B) 166
ACM (SWITCH=A) 168
CALL PATH ESTABLISHED

*FIG. 7*

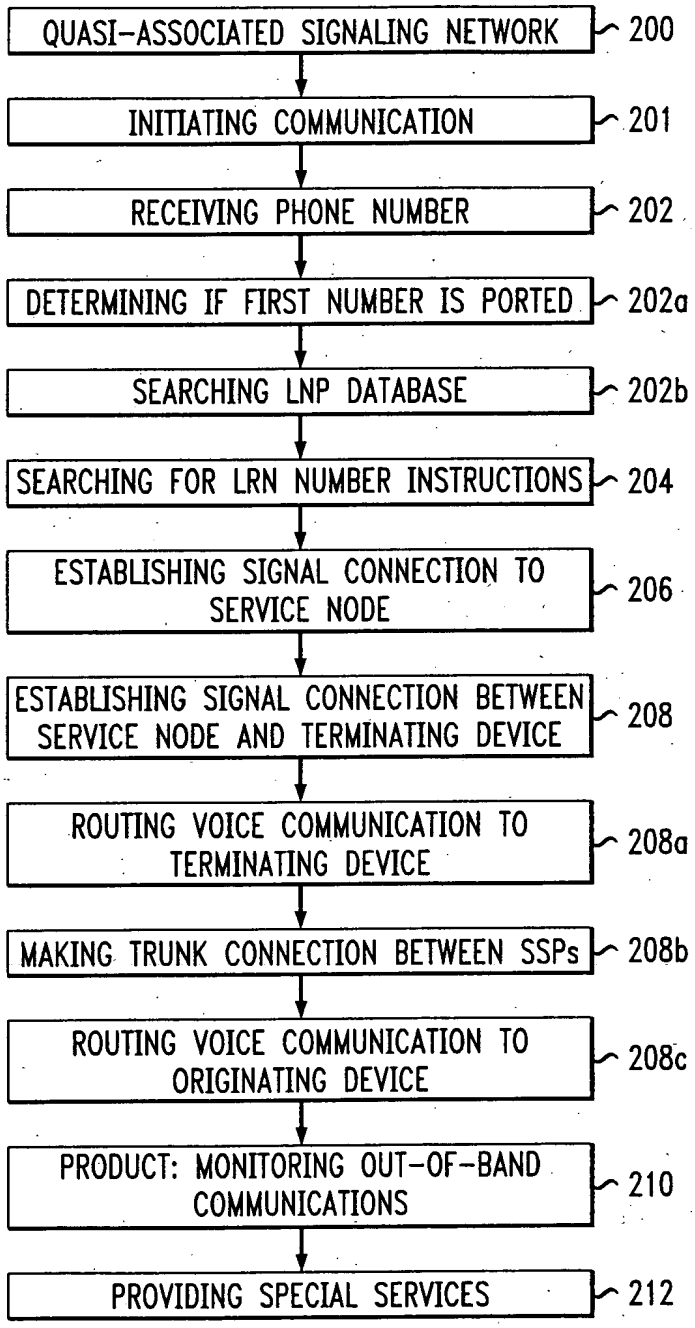

QUASI-ASSOCIATED SIGNALING NETWORK
200
INITIATING COMMUNICATION
201
RECEIVING PHONE NUMBER
202
DETERMINING IF FIRST NUMBER IS PORTED
202a
SEARCHING LNP DATABASE
202b
SEARCHING FOR LRN NUMBER INSTRUCTIONS
204
ESTABLISHING SIGNAL CONNECTION TO SERVICE NODE
206
ESTABLISHING SIGNAL CONNECTION BETWEEN SERVICE NODE AND TERMINATING DEVICE
208
ROUTING VOICE COMMUNICATION TO TERMINATING DEVICE
208a
MAKING TRUNK CONNECTION BETWEEN SSPs
208b
ROUTING VOICE COMMUNICATION TO ORIGINATING DEVICE
208c
PRODUCT: MONITORING OUT-OF-BAND COMMUNICATIONS
210
PROVIDING SPECIAL SERVICES
212

*FIG. 8*

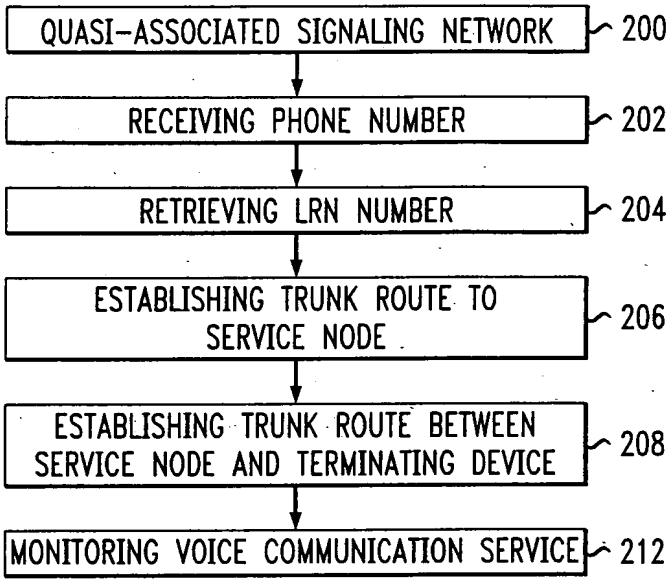
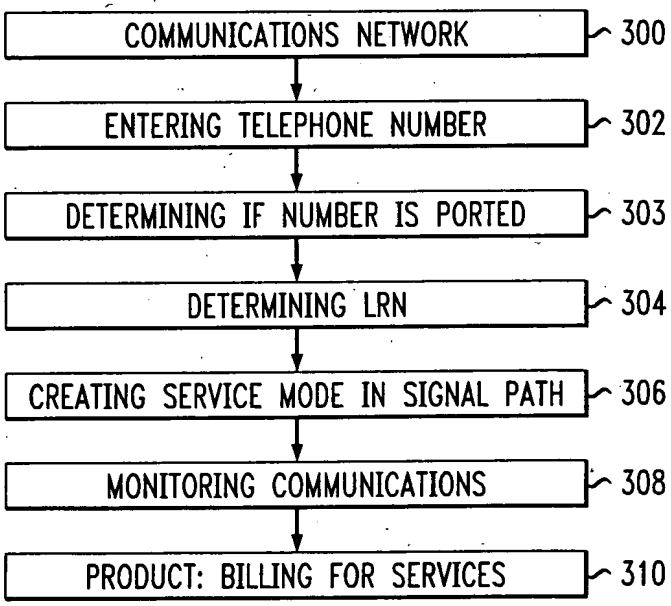

QUASI-ASSOCIATED SIGNALING NETWORK
200
RECEIVING PHONE NUMBER
202
RETRIEVING LRN NUMBER
204
ESTABLISHING TRUNK ROUTE TO SERVICE NODE
206
ESTABLISHING TRUNK ROUTE BETWEEN SERVICE NODE AND TERMINATING DEVICE
208
MONITORING VOICE COMMUNICATION SERVICE
212

*FIG. 9*


COMMUNICATIONS NETWORK
300
ENTERING TELEPHONE NUMBER
302
DETERMINING IF NUMBER IS PORTED
303
DETERMINING LRN
304
CREATING SERVICE MODE IN SIGNAL PATH
306
MONITORING COMMUNICATIONS
308
PRODUCT: BILLING FOR SERVICES
310

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

| | | |
|---|---|---|
| In re application of: | : | |
| | : | |
| **JOHN MARK DAMMROSE, ET AL.** | : | Art Unit: **2642** |
| | : | |
| Serial No. **09/589,241** | : | Examiner: **T.P. Knowlin** |
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| Filed: **June 7, 2000** | : | Atty's Docket: **ATTW01-00025** |
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# APPENDIX D -
# The American National Standard for Telecommunications Telecom Glossary 2000

The following page is printed from The American National Standard for Telecommunications - Telecom Glossary 2000 at http://www atis.org/tg2k/.

# service control point (SCP)

**service control point (SCP):** An entity in the intelligent network that implements a service control function. [T1.667-1999]

This HTML version of Telecom Glossary 2K was last generated on Wed Feb 28 15:39:21 MST 2001. References can be found in the Foreword.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

| | | |
|---|---|---|
| In re application of: | : | |
| | : | |
| **JOHN MARK DAMMROSE, ET AL.** | : | Art Unit: **2642** |
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| Serial No. **09/589,241** | : | Examiner: **T.P. Knowlin** |
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| For: **SYSTEM AND METHOD OF USING LOCAL NUMBER PORTABILITY (LNP) TO REDIRECT TERMINATING CALLS TO A SERVICE NODE** | : | |

# APPENDIX E -
# Copy of Notice of Appeal Previously Filed

DOCKET NO.: ATTW01-00025
Customer No.: 34700

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | |
|---|---|
| In re application of: | John Mark Dammrose et al. |
| Serial No.: | 09/589,241 |
| Filed: | June 7, 2000 |
| For: | SYSTEM AND METHOD OF USING LOCAL NUMBER PORTABILITY (LNP) TO REDIRECT TERMINATING CALLS TO A SERVICE NODE |
| Group No.: | 2642 |
| Examiner: | Thjuan P. Knowlin |

**MAIL STOP AF**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

## NOTICE OF APPEAL

The Applicant hereby appeals to the Board of Appeals from the decision of the Examiner in the Office Action dated April 6, 2004, finally rejecting Claims 1-25.

A check in the amount of $330.00 is enclosed in payment of the Notice of Appeal filing fee. The Commissioner is hereby authorized to charge any additional fees connected with this

communication (including any extension of time fees) or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK, P.C.

Date: 7/6/14

Matthew S. Anderson
Registration No. 39,093

P.O. Drawer 800889
Dallas, Texas 75380
Tel: (972) 628-3600
Fax: (972) 628-3616
E-mail: *manderson@davismunck.com*